

LIGHTHOUSES, &c. (IRELAND).



COPY of REPORT to the BOARD of TRADE by the PORT of DUBLIN
CORPORATION of the Results of their Inspection of LOCAL LIGHT-
HOUSES, BUOYS, and BEACONS in *Ireland*.

(PRESENTED PURSUANT TO ACT 25 & 26 VICT. c. 63, s. 48.)

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REPORTS by the PORT of DUBLIN CORPORATION on Inspection of the several LIGHTS, BUOYS, and BEACONS under the Jurisdiction of LOCAL AUTHORITIES in Ireland, 1864.

GENERAL REPORT.

Sir,

Ballast Office, Dublin,
7 April 1864.

I HAVE the honour to acquaint you, for the information of the Lords of the Committee of Privy Council for Trade, that the Board having had under their consideration the 43d clause of the "Merchant Shipping Act Amendment Act," 1862 (25 & 26 Vict. c. 63), directed the Inspecting Committee to take immediate measures to inspect the lights, buoys, and beacons under local jurisdiction and authority of the several ports in Ireland; and that Committee having deputed two of their members, viz., Sir James Dombryn and Robert Callwell, Esq., to proceed on that service, I am now directed to bring under the consideration of their Lordships, in a general Report, the results of their inspection.

The deputation, previous to leaving Dublin, forwarded to each of the ports about to be visited, a list of queries which will be found in the Appendix (A), attached hereto, and which so much facilitated their inquiries as to render explanations on the spot easily understood; and it is gratifying to be enabled to state that, on the whole, they found the measures adopted for the improvement of the navigation of the ports in Ireland generally satisfactory.

The inspection by the deputation commenced at Cork, where the lighting, buoying, and marking has been most judiciously carried out; the only improvements suggested at that port as regards the lighting or marking would be a more powerful description of lamp and reflectors in the lighthouse.

At *Waterford* there is not any light, but buoying and marking appears neglected and deficient; and the same observation applies to the port of *New Ross*.

At *Wexford* great improvements have been effected in marking and buoying, and more contemplated; and the Harbour Commissioners have it under consideration to place two lights there, for guidance of vessels over the bar, at night.

At *Drogheda* the lights are, with the exception of those at the adjoining port of *Dundalk*, of an unusual description, being lanterns hung upon hooks attached to the sides of the beacons (which serve as guides by day), and when once lighted are allowed to burn out without further attention.

At *Dundalk*, in like manner, there are several beacons to mark the channel by day, and at night, from the top of certain beacons, lights are placed, which are, as at *Drogheda*, allowed to burn out.

At *Carlingford* there are no lights under local jurisdiction, but there are several buoys and some sticks, called perches, placed by Lord Clermont, who levies dues on all vessels entering the lough, but who considers, as shewn by his letter (Appendix B.), that it is not compulsory on him to mark the lough, or give any equivalent to the trade for the dues so levied.

At *Strangford Lough* there are no lights, but the beacons and marks are well placed, and carefully maintained. They are under the jurisdiction of Lord De Ros, and Captain Nugent, who receives tolls from all vessels anchoring in the Lough. See their letters (Appendix C).

At *Belfast* the lights and beacons appear to be most judiciously placed; but the deputation were of opinion that the description of lamps and reflectors might be greatly improved.

Londonderry.—The deputation were of opinion that the lights were well placed, and, with one exception, in good order; but they have expressed an opinion that a lighthouse instead of a lightship should be placed where that vessel is now lying.

Sligo.—There are no lights under local jurisdiction; the Channel, however, from Oyster Island (where two lights are maintained under the authority of this Board, is well and carefully marked.

Ballina.—The jurisdiction of the Harbour Commissioners at this port extends only as far as the bar at the entrance of the Moy River; and as it is only accessible in daylight, and subject to frequent changes, after heavy falls of rain by freshes from the loughs above, the deputation were of opinion it is sufficiently marked.

Westport.—This port has not any light; but the Channel, from Innislyre to the quays, a distance of about five miles, is marked by perches and warping-buoys, which appear sufficient for the trade of the port.

Galway.—There is no light, mark, or beacon under the jurisdiction of the Harbour Commissioners, to mark the entrance to or anchorage at this port.

The River Shannon.—Since the correspondence with the Lords of the Committee of Privy Council for Trade, so far back as 1861, no steps have been taken to mark this extensive estuary; but this Board having been informed it was the intention of the Commissioners of Public Works to undertake that service, they lost no time in putting themselves in communication with them. It would appear that it is not their intention to mark that estuary beyond a short distance from Limerick; and as it will be seen by the inspector's report hereunto annexed, that such marking would be wholly insufficient, this Board purpose bringing the subject again under their Lordships' consideration as soon as the Board of Works have completed all they have purposed doing at that port. See Appendix (D).

The foregoing is a brief abstract of the reports of the deputation, copies of the originals having been transmitted to each local authority for their information as required by the Act, and copies are herewith forwarded for their Lordships' information.

The deputation have further reported that at all the ports visited by them, the greatest anxiety was shown by the authorities to aid them in the execution of this duty, and in offering the following observations and suggestions, they are actuated by a desire to see the improvements which they deem necessary fully carried out, so far as local jurisdiction as to management is concerned, but there are some matters which the deputation are desirous of pointing out in which it would appear that some aid should be given to mark approaches to harbours out of the jurisdiction of any local authority, and which would be of great service to the general commerce of the country; this subject they have stated they purpose bringing forward in a separate report.

The deputation commence their observations as to the improvement of sundry matters under local jurisdiction. They state, that in the first place that the lights in several cases are very deficient in brilliancy, at Cork for instance; at Black Rock the reflectors are quite worn out, and that at the other lighthouses on piles, the thick glass nearly approaching to bulls-eyes must necessarily absorb a considerable portion of the light. The engineer, Sir John Benson, fully admitted these defects, and stated they should receive immediate attention.

At Drogheda the lights are, as already stated, mere lanterns attached each night to beacons, and receive no further attention. The officers of the port who attended the deputation, stated they were sufficient for the purpose, and no complaints had been made, but still it appeared to the deputation that it must be subject to some risk. A similar observation will apply to Dundalk, only that the lanterns there are placed on the top instead of the side of the beacon as at Drogheda.

REPORTS ON LIGHTHOUSES, &c. (IRELAND).

At Belfast one light was semidioptric, and was in most perfect order; the other lights were lamps of very weak power, and are susceptible of great improvement.

At Derry the lights were hollophotal, constructed by Messrs. Stephenson, and were the best the deputation had seen, and they were assured they were of great power and brilliancy.

The next subject brought under the notice of the Board by the deputation, is the inadequacy of pay, and the class of persons entrusted with the management of the lights. At Cork one lighthouse (Black Rock) was in charge of a woman, and two other lights, of very old men with very low wages. At Derry, one lighthouse was in charge of an old woman, and another was in charge of a man where the dirt and filth was most discreditable. This may, in a great measure, be accounted for by the toleration of a system which must be most injurious to the efficiency of any establishment.

It appears from the report of the deputation, that any man receiving an appointment from the Harbour Commissioners is allowed to sublet it, and that this is done again by the new occupant, so that where a man is appointed at 12 s. or 14 s. a week, it is not unusual to find after two or three sublettings, the actual occupant is only in possession of 7 s. or 8 s. per week.

With reference to the observations of the deputation as to the authority exercised over the harbours of Carlingford and Strangford, this Board are clearly of opinion it should be ascertained whether the parties claiming dues from vessels anchoring in these loughs are not bound to place safeguards to the navigation of those places. With respect to Strangford this has been most carefully attended to, but at Carlingford the marking is most deficient, and is, as will be seen by Lord Clermont's letter, already alluded to, not deemed compulsory by him.

The next subject to which the deputation have drawn the attention of the Board was the irregular system of distinguishing the buoys and beacons. Black and red are the principal colours, but they vary in the order in which they are placed; black being sometimes on the starboard hand, and red on the port; and as often the order is reversed. The authorities would, it appears, be ready to conform to a uniform system, should such be required from them.

In order to afford more easy reference to the observations on the several lights and marks in their reports of the various harbours, &c., the deputation have placed in the margin, sketches, showing the different lights and marks.

The deputation here conclude their observations on all matters relating to local jurisdiction or authority at the several ports visited by them, and the Board feel bound to express their thanks to those gentlemen for the satisfactory way in which they have discharged this duty.

Since this report was prepared, the letter in the Appendix (E.) has been received from the Waterford Harbour Commissioners, which their Lordships will, no doubt, concur with this Board in deeming very satisfactory.

The Secretary,
Marine Department,
Board of Trade.

I have, &c.
W. Lees,
Secretary.

DETAILED REPORTS.

CORK.

THE Sub-Committee appointed to proceed to Cork for the purpose of examining the lights, buoys, and beacons, under the jurisdiction of the Harbour Commissioners of that port, have the honour to state that on their arrival there they found every facility which that body could provide was ready, and placed at their disposal for the purpose of carrying out the objects of their inquiry. On Tuesday morning, the 26th instant, the engineer of the Harbour Board

Board, Sir John Benson, and Captain Clarke, kindly accompanied them in their steamer down to the entrance of the harbour. Your Committee had a most favourable opportunity of observing all the lights, buoys, and marks placed for the safe navigation of that space from the entrance of the harbour to the quays of Cork, a distance of fully 12 miles in extent, and the Committee have much pleasure in being enabled to report that, in their judgment, the Channel has been most effectually marked and defined; the general principle having been fully carried out, viz., of having black buoys on the starboard, and red buoys on the port side, from the entrance to the quays; and fairway buoys, black and white, in the vicinity of Queenstown.

With respect to the lights, the Committee are of opinion that much credit is due to the Commissioners for the judicious selection made by them of the positions in which they have been placed; however, your Committee are clearly of opinion that the lights may be greatly improved by alterations which they pointed out to Sir John Benson, in which he most fully concurred. It is quite true that the short distances between these lights render it unnecessary that they should be of a powerful character, but still much may be gained at a very trifling cost, by giving a stronger, and in all respects a better light, more especially useful in hazy or foggy weather.



BLACK ROCK LIGHTHOUSE

The light at Black Rock is in charge of a young woman, and appears to be well kept and clean; those in the two Pile Lighthouses were in charge of men who appeared to be rather too old, and not so efficient as to be (in the opinion of your Committee) quite fit for the charge of so important an office. The two Upper Lights, viz, King's Quay and Tivoli, are ordinary gas lamps showing red.

The Committee have not deemed it necessary to explain, in detail, the various courses which are indicated by the lights and other marks to guide vessels through the several windings and intricacies in the Channel, but submit herewith a chart on which they have caused to be laid down all the lights, buoys, and beacons for that purpose.

The Committee cannot conclude their report without bearing their testimony to the great pains taken, and the care bestowed by, the Cork Harbour Commissioners by giving every facility in their power to the commerce of the place, and your Committee feel bound to thank the Harbour Board for the kindness and courtesy shown to them on this occasion, and for their ready desire to afford them all necessary information.

WATERFORD

In continuation of the report of your Committee of this date, they beg to state they proceeded to Waterford, and, through the kindness of Mr. William Macdonald, had a steamer placed at their disposal, in which they proceeded (accompanied by Mr. Stephens, engineer to the Harbour Commissioners) to the bar at the entrance of the Waterford river. They found that the centre buoy marking the bar had been recently sunk by a vessel running foul of it. On another spot, near that place, a pilot boat recently sunk had a buoy placed over it to mark the position of the wreck; the centre buoy still remained wanting. They then proceeded towards Waterford, and found the buoy to mark Duncannon shoal in correct position, and apparently in good order. On the port side they found the buoys marking the ridge of Drumroe Bank quite too small, and in such state from accumulation of seaweed and dirt as to render

render them scarcely distinguishable. From those buoys to the perch at Passage there is not any mark to guide vessels to the anchorage at Passage except that perch, and that is so very difficult to distinguish by night, owing to its being backed and obscured by the high land in its vicinity, that your Committee feel not any difficulty in urging the necessity of placing a small light on piles at the end of that spit. They submit, that the secure anchorage at Passage as an asylum harbour (being the only one between Queestown and Dublin) is of much importance to the general commerce of the country; as a proof, they refer to the returns herewith submitted, showing the number of vessels which arrived and remained at the anchorage for safety during the years 1861, 1862, and 1863.

A reference to the Admiralty chart will also show that between Passage and Cheek Point, two buoys are laid down as marking the edge of Seedens Bank and the Committee observe that there are not any buoys there, nor has there been for many years, as they are informed. In proceeding up the river, they found the buoy intended to mark Bolton's Rocks has been for some cause or other shifted a considerable distance from its proper berth, and is now about a cable and half length out of position. Again, further up on the N. R. point of the little island, a buoy has in like manner been out of place by about the same distance. At the west end of the Ford Channel a buoy was some time since sunk, and has not since been recovered, nor has it been replaced by any other.

The Committee regret that they cannot report favourably of the state of the buoys, &c. in this port. They find that the system adopted by the Harbour Commissioners is ill calculated to ensure that efficiency which is so essential to the shipping interests of the port. They have been informed that there is not any regular and systematic supervision of the buoys and beacons, &c., but that it depends on the pilots of the port to report any changes they may observe in the position of the buoys or other marks, and thus there is not any individual responsibility on that head.

The Committee, therefore, submit that the Harbour Commissioners of Waterford be informed by the Board of the grave responsibility which rests upon them in allowing these great irregularities to exist, more especially with reference to the total absence of buoys, which are laid down on the Admiralty charts as marks and safeguards for vessels entering the harbours of Waterford and New Ross.

The new cut called the Ford Channel, now under the consideration of the Board of Trade, appears to be a most desirable and important measure; and as it appears that there is every probability of its being carried out, the Committee do not think it necessary to make any remarks or observations as to the removing the rocks in the narrow and circuitous channel at the southern and western part of the little island.

NEW ROSS.

On leaving Waterford the Committee proceeded to New Ross, and had a favourable opportunity of observing the buoys laid down by the Harbour Commissioners of New Ross for the safe navigation of that estuary from Cheek Point to New Ross. The first buoy is laid down at a bank called the Pink, near to the bar of Cheek Point; this buoy is small, and, in the opinion of the Committee quite insufficient for the purpose, and it was fully a cable and half length out of its correct position. The second buoy at Pilltown was likewise too small and insufficient; the third buoy at Rochtown Bank was also about a cable and half length out of position; the fourth buoy, at Drumdowney Point, could scarcely deserve the denomination of a marking buoy, being so very small and inconsiderable. On the whole, the Committee are of opinion that not one of these buoys is fit or suited for the purpose intended, two of them being so long out of position shows a want of attention which the requirements of the port immediately demand.

WEXFORD.

On the 29th instant proceeded to Wexford, where Mr. Allen, one of the Harbour Commissioners, and Mr. Devereux, pilot master, accompanied your Committee in the harbour steamer down to the entrance of the harbour, and from thence to the Hantoon Channel, and round the Dogger Bank, and returned by the Eastern Car Channel into Wexford. All the buoys and perches as laid down in the Admiralty charts are correct, and in their proper positions, besides which, they observed several additional buoys laid down which are subject to frequent changes and alterations, owing to the shifting nature of the sands, which altogether changes the course of the bar (sometimes in a few hours), and, consequently, these cannot be laid down on the charts as permanent marks or guides.

Your Committee find that the pilots in this port are required to attend to the scraping, painting, and replacing of the buoys, which are very numerous.

The deputation now feel it necessary to draw the special attention of the Committee to the very unsatisfactory state of the buoys, &c., in the harbour of Waterford, and they submit whether the attention of the Waterford and New Ross Harbour Commissioners should not be immediately drawn to the subject with reference to sections Nos. 394 and 935 of the "Merchant Shipping Act, 17 & 18 Vict. c. 194."

DROGHEDA.

GREAT changes have been effected in the navigation of this river within a comparatively short period; maintaining walls have been built from the quays to its mouth, and beacons have been placed at suitable distances for the guidance of vessels to their anchorage; these beacons are large, very substantial, and built of stone; at certain places lamps are attached to them at night; these lamps are placed on hooks on the beacons at either side, so as to show either up or down the river, as occasion may require.

The Harbour Commissioners informed us that they had it in contemplation to place a light at a place which is at present marked by a buoy, now called the bar buoy, and near to a stone tower which they built on the starboard hand at the entrance of the river, by so doing they consider that the two lights belonging to this department would become unnecessary, but it is not proposed to discontinue the north light.

It was very satisfactory to perceive such judicious and valuable improvements taking place in a port of such limited resources.

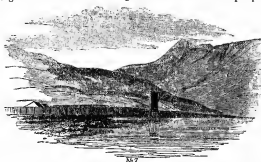
DUNDALK.

THIS port is exceedingly difficult of access, the sands extending fully five miles to seaward from the mouth of the river; the entire of that space has been carefully marked with perches, as far as the File Lighthouse, which is under the jurisdiction of the Port of Dublin Corporation;



beyond that three buoys have been placed by the Harbour Commissioners for the purpose of more clearly defining the entrance; upon seven of these perches lamps

lamps are placed at night upon their summits, for which purpose a boat is employed; this boat proceeds at dusk, placing the lamps at their stations, which are left to burn out. These perches are all built substantially on timber piles, and are boarded for about 10 feet from the top to render them conspicuous. The ascent to the lamp is by iron ladders, the top being surrounded by strong iron rails, the centre having a socket in which the lamp is placed.



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OFF BALLYMASCARLON RIVER.

The officers of the Harbour Commissioners assured us that they were quite suited for the requirements of the place. Dredging is extensively carried on, and it is evident that with their limited means they are doing much for the navigation of the port. We were, however, enabled to suggest some alterations in their lamps, which we are satisfied will much increase their brilliancy.

NEWRY.

In a correspondence with the Board of Navigation of Newry we found that their jurisdiction did not extend beyond Warrenpoint, and that such lights as were exhibited were on posts by the owners of steamers for their own use at such times as they might require them; "the navigation company supplying posts and lamps, but not taking upon themselves responsibility as to their care, their bye-laws providing that vessels passing in their navigation at night should do so at their own risk."

Under these circumstances, we did not think it necessary to make further inquiry on that head.

From the entrance of the lough to Warrenpoint, the buoys and perches are under the sole jurisdiction of Lord Clermont, who claims dues from all vessels entering the lough. The perches are altogether inefficient, being scarcely distinguishable in the finest weather.

We think it desirable that his Lordship's attention should be drawn to this subject, when we have no doubt that he will either improve the perches or place buoys in lieu, outside of the dangers, if such should be practicable.

The buoys, with one exception (that off Greenore Point, which is much too small), appear to be well suited for the purposes intended.

STRANGFORD LOUGH.

THERE is not, properly speaking, any official controlling power or local Board for the management of this port. The dues payable by vessels anchoring in the lough are small in amount, and are received by Lord de Ros on the west side, and by Captain Nugent on the east; the perches and beacons, as stated in the accompanying list, Appendix (C.), being put up by them and supported at their expense, are well and efficiently maintained.

We found on inquiry that this lough is much resorted to as an asylum harbour, upwards of 700 vessels having taken refuge there during the year 1863, for safety solely.

On a former occasion the Committee of Inspection had under their consideration the propriety of placing a beacon on the "Pladdy Lug," a long and dangerous reef stretching out seaward on the starboard hand entering the lough. In the meantime, however, they found that Captain Nugent had placed a perch on that point; this we consider quite insufficient, and we would recommend that a beacon, similar to that on the north rock, should be placed on this point.

The growing importance of this lough as a harbour of refuge will be brought under the notice of the Committee of Inspection in a separate Report.

BELFAST.

We arrived at this port on the 15th, after our inspection of that of Derry, as detailed in our Report of the 13th instant; and having previously arranged with the Harbour Commissioners for the inspection of the lights, &c., under their control, and having through their courtesy and attention obtained the use of their steamer, we proceeded down, and to the entrance of the lough this day, and inspected and viewed the several lights, buoys, and beacons placed for the safe navigation of the port of Belfast.

The great improvements which have taken place in the port of Belfast are entirely due to the energetic and skilful management of the Harbour Commissioners of that port, formerly difficult of access, and now easily approached by the lights, buoys, and beacons which have been so judiciously placed for that purpose.

We are, however, of opinion that improvements which our experience has made us acquainted with might be most advantageously adopted for the purpose of giving greater brilliancy to the lights; and as the suggestions we made were at once acknowledged and appreciated by the engineer of the Commissioners, it is not necessary for us in this Report more particularly to point out what these suggestions were, more especially as that gentleman stated that he would not fail to bring them under the immediate notice of the Harbour Board. He also expressed a hope that on any future inspection we would find they had been fully carried out.

We would here remark that in our opinion the very low scale of wages granted to the light-keepers is not sufficient to insure an anxious, zealous, and careful discharge of the important duties entrusted to them.

In an interview we had with the Harbour Commissioners, they anxiously pressed on our attention a subject which has on several occasions been under the consideration of the authorities; viz. the removal of the light from Cope-land to Mew Island; but as we do not think that matter comes within the scope of our present inquiry, we defer entering on the subject in this Report.

LONDONDERRY.

IN continuation of our Report on the inspection of lights, buoys, and beacons under local authority or jurisdiction, we beg to state that we yesterday completed our inspection of the river and estuary of Lough Foyle. It appears to us that very great attention has been bestowed by the Harbour Commissioners on the navigation of the port of Derry, there having been no less than 10 lights, besides 14 buoys and 15 beacons, placed for the purpose of affording safe and easy access from the entrance of the loughs to the quays of Derry, being a distance of about 20 miles, none of which marks existed 30 years ago. The rule has been adopted in the port of painting all buoys and beacons, &c., on the starboard hand red, and those on the port hand black.

Where so much has been done, it would be scarcely just to criticise or complain of the (in some instances) rather crude and imperfect structures, or of the want of order and regularity which should govern all matters pertaining to the safe navigation of so important a port as Derry has become. Owing to the stormy and inclement state of the weather, which rendered communication very difficult, we were enabled to land at but two shore and one pile lights. The first, being the tower at Colkeeragh, was kept by an old woman, and although tolerably clean, the structure is capable of much improvement. The
Light

Light Holophotal is stated by the pilots to be good, but we are of opinion, that it could be very much improved if the reflectors were silvered, instead of being of a metal which is of very inferior brilliancy. From the tower at Colkeeragh we proceeded to Connyberry Pile Light, which, we regret to say, we found in a most discreditable state and condition; it is, however, but justice to state, that the harbour master was so fully aware of this that he had previously provided for the dismissal of the man who was in charge of it.



We then proceeded down the lough as far as the Innishowen Lights, and ran close to all the buoys, beacons and lights within that space. As already stated, we were unable to visit the pile lights, but we were informed that they were all of the one character, and lighted by the same description of lamp: the buildings being all similar, we regretted less the fact of our inability to land on and inspect them. We, however, inspected the light at Warrenpoint, and were glad to see that the present very unsightly but temporary wooden building in which it is placed is now being superseded by a solid well-built structure of stone and brick. On the whole, we feel bound to report, that while we give full credit to the Harbour Commissioners of Derry for their desire to benefit the port, yet we cannot fail to notice that they cannot reasonably expect their lights to be properly or efficiently attended to, nor the respectability of their establishment be recognised by the public, until more adequate remuneration be given to the parties in charge of their lights. We would suggest, for the consideration of the Harbour Commissioners, whether it would not be in the end more economical and more efficient if a pile light-house was substituted for the light-vessel now at the Crook. Should they concur in this suggestion, we would strongly advise them to procure from the Harbour Commissioners of Cork the plan of pile lights adopted by Sir John Benson for that port.

In conclusion, we have to state that we received every assistance from the Harbour Commissioners and their officers in the discharge of this duty.

SLIGO.

On our arrival at this port we were met by several of the Harbour Commissioners, with their secretary and harbour master, who kindly accompanied us to within a short distance of the outer limit of their jurisdiction.

Very great improvements have been recently made, and further works are now being proceeded with, which will greatly facilitate the navigation of the port. The former circuitous channel has been completely superseded by a new channel, which has been dredged out under the able management of their engineer. This channel is marked by 25 perches, placed at short intervals along retaining walls. These perches are rendered very conspicuous by large cages or gratings at their summits, and do not (by their open construction) so much impede the force of the winds as to render them liable to be blown down.



The Commissioners drew our attention specially to the want of a sufficient mark for the "Wheaten Rock" (beyond their jurisdiction), which this Board had undertaken many years since to place a perch upon, but which has never been carried out. We would now suggest the placing of a buoy outside the rock,

rock, as it appears that all efforts to obtain a contract for the placing of a perch on the rock have failed.

The Commissioners also drew our attention to some alteration in the lights, which we will bring before the Board in its proper place.

BALLINA.

By the aid of a tug steamer, we were enabled to examine this port very effectually, having stood out to sea and viewed the dangerous reef of Carrig Patrick, &c., which lay between Killala and Killcummin Head, near to which place the French Army landed in the year 1798. The entrance to the Moy River, which is the extent of the jurisdiction of the Ballina Harbour Commissioners, is marked by a small black buoy on the bar, and two small perches on the sandbank on the starboard hand. From thence to Ballina there are 25 buoys and three perches; all are of the smallest description.

However, as the ingress or egress is quite impracticable by night, owing to the circuitous nature of the channel, it would appear that they are quite sufficient for the purpose, more especially as floods or freshes frequently render it necessary to change the position of their buoys, in order to mark the new channel thereby created.

One small buoy has been laid down by the Ballina Harbour Commissioners to mark the entrance to the anchorage of Killala, although beyond their jurisdiction.

This anchorage being a very important place of refuge for the coasting trade, and for vessels which may from the state of the tide be prevented from entering the Moy, we have not any hesitation in stating our opinion that it should be marked by a large buoy, at the expense of the "Mercantile Marine Fund."

We were kindly accompanied on this inspection by Colonel Knox Gore, chairman of the Board, and also by the officers of that Board.

WESTPORT.

With reference to our Report of this date, we beg to state that after our interview with the Harbour Commissioners of Westport, we availed ourselves of the opportunity our presence there afforded of examining in part the perches and buoys placed by that body to mark the channel from Innislyre to Westport.

There is not any light; and as the perches and buoys are of very small dimensions, we did not deem it necessary to make a minute inspection of them. They, however, seem to be well arranged to lead up to the Quay.

(signed) *J. Donbrain.*
Robert Callwell.

APPENDIX.

APPENDIX (A.)

REPLIES TO QUERIES.

C O R K.

RETURN of the several Lights, Buoys, Beacons, or Perches, within the Jurisdiction of the Harbour Commissioners of Cork.

Name or Denomination of Lights, Buoys, Beacons, or Perches; their distinctive Colours or Marks.

Name or Denomination.	Colour, Mark, or Shape.
Lights:	
Lough Mahon - - - - -	Red; octagon; and built on piles.
Dunkettle - - - - -	Green; similar shape; and built as the other.
Blackrock Castle - - - - -	White; placed in round tower of Castle.
King's Quay and Tivoli - - - - -	Red; gas lamps with red glass.
Perches - - - - -	Black; for position, see the chart forwarded.
Buoys - - - - -	Black on the starboard coming up the river, and red on the port.

If lights, whether they be permanent or periodical; if the latter, how or on what occasions lighted?

All the lights are permanent.

Object of placing such light or lights, buoys, beacons, and perches?

Lights placed at the request of the owners and masters of ships trading to the port, for better safety for night navigation; buoys, beacons, &c. for a similar purpose.

After sailing through the Passage Reach there is a red can buoy placed on a shoal extending off Horsehead, about 1½ cable length from shore; when abreast of this red buoy, sail for Lough Mahon Lighthouse (red), keeping it a little on starboard bow. The object of this light is to guide vessels into the narrow channel. When off Lough Mahon Light, steer for Dunkettle Light (green), which light keep abreast half point on starboard bow, will lead through Dunkettle Reach; when abreast of Dunkettle Light, open the red light on King's Quay, for which steer, keeping it about half a point on port bow will lead through Blackrock Reach; when abreast of King's Quay Light, steer for Tivoli Light (red), until you make the buoy on the bank projecting from navigation wall, Tivoli. Then starboard your helm and sail for the quays of the city.

The beacons are intended for the same object as the lights, but since the lights were all completed they are little used at night.

The red buoys are on the port side, and black on starboard, coming up river.

Whether approached by light, compass, bearings, or marks?

Approached by lights and buoys.

Distances between the several Lights, Buoys, Beacons, or Perches, from the entrance of Cork Harbour to the Quays of Cork.

	Miles.	Cables.
Spit Light to Lough Mahon - - -	5	6½
Lough Mahon to Dunkettle - - -	1	3
Dunkettle to Blackrock Castle - - -	-	3½
Blackrock Castle to King's Quay - - -	-	6½
King's Quay to Tivoli - - -	-	6
Tivoli to east end of Penrose's Quay - - -	1	—

If lights, buoys, beacons, or perches, how often inspected or examined, and by whom?
Inspected frequently, but not at any fixed period, by the engineer and harbour-master.

If lighthouse, beacon, or perch, how often painted, or buoy how often shifted?
Lighthouses painted once a year, buoys painted twice a year, and not shifted unless to repair defective moorings.

WATERFORD.

RETURN of the several Lights, Buoys, Beacons, or Perches, within Jurisdiction of the Waterford Harbour Commissioners.

Name or Denomination of Lights, Buoys, Beacons, or Perches; their distinctive Colours or Marks.

Name or Denomination.	Colour, Mark, or Shape.
Hook Light - - - - -	Bright and fixed.
Duncannon (two lights) - - - - -	Bright, one a tide light.
Black Hill Light, above Duncannon - - - - -	Bright and fixed.
Light at pier of Dunmore - - - - -	Red seaward; bright up harbour.
Three Buoys on Bar - - - - -	That on starboard hand, black; the middle buoy is chequered black and red, with a perch on top; the western or port buoy is red.
One Buoy on Spit of Duncannon - - - - -	Black.
Three Buoys on Drumroe Bank - - - - -	Red.
One Beacon on Spit of Passage - - - - -	A pole, with harrel on top, coloured black.
One Buoy off Bingledees Rocks - - - - -	Red.
One Buoy off Bolton Rocks - - - - -	Red.
Eight Buoys on the Ford - - - - -	The four on starboard hand, black; the four on port hand, red.
Five Buoys in King's Channel - - - - -	The three on the starboard hand, black; the two on the port hand, red.

If lights, whether they be permanent or periodical; if the latter, how or on what occasion lighted?

The lights at this harbour belong to Port of Dublin Corporation, viz.: Hook and Dunmore Lights, at entrance of Waterford Harbour; and Duncannon Lights, six miles inside. Hook, Dunmore, and two of the Duncannon Lights are permanent; the third light at Duncannon is a tide light.

Object of placing such light or lights, buoys, beacons, or perches?

The Hook Light marks the entrance of Waterford Harbour. The light at Dunmore marks the entrance to the pier, and acts as a guide to ships coming down Waterford Harbour. The light in Duncannon and Black Hill, in one, marks the best passage for ships when crossing the Bar.

The rule with regard to the buoys, when entering Waterford Harbour, is as follows: black buoys to be kept on the starboard hand, red buoys on the port hand.

The buoys on the Bar mark its position, and indicate the best passage thereon. The buoy at Duncannon marks the Spit that runs out from the back of the Fort.

The

The beacon at Passage marks the Spit or Mussel Bank there. Two buoys mark the position of the Bingledees and Bolton Rocks, one at each danger. Eight buoys mark the channel on the Ford, four at each side.

There is a buoy on Birslein Bank; one at Harrington's Point; one over the Maulus Rock; one at the Golden Rock; one at Dirty Tail, in the King's Channel.

Whether approached by light, compass, bearings, or marks?

The light in Duncannon Fort and that on Black Hill, in one, is the guiding mark for ships entering Waterford Harbour.

Distances between the several lights, buoys, beacons, or perches within the jurisdiction of the Waterford Harbour Commissioners?

Dunmore Light is distant about three miles from the Hook; Duncannon Light about six miles from the Hook.

The buoys on the Bar are nearly five miles distant from the Hook; the buoy on Spit of Duncannon is a little more than half a mile from the light in the Fort.

The buoys on Drumroe Bank are placed, one abreast of Duncannon, the second a quarter of a mile further up, and the third buoy near half a mile still further up, on the edge of the bank. The beacon on the Spit of Passage is a little over a quarter of a mile from the latter place.

The Bingledees Buoy is abreast of Glass House; that on the Bolton Rocks abreast of Belview. The eight buoys on the Ford and the five in the King's Channel, as well as all the other buoys mentioned in these reports, together with the lights, &c., can be most correctly understood by referring to Fraser's chart of Waterford.

If lights, buoys, beacons, or perches, how often inspected or examined, and by whom?

The buoys and beacons, being alone under the jurisdiction of the Harbour Commissioners of Waterford, are examined monthly by their pilot-master. The lights are under the jurisdiction of the Port of Dublin Corporation.

If lighthouse, beacon, or perch, how often painted; or buoy, how often shifted?

The buoys and beacons are overhauled, raised, and examined, as occasion may require; there were no particular times for doing so heretofore, but for the future I have recommended that a regular overhaul and thorough examination of each be made twice in every year.

Sir, Ballast Office, Waterford, 30 January 1864.

On Wednesday last you desired to know the number of vessels which came into Waterford Harbour windbound or disabled or not bound thereto.

I beg to say that 746 of such vessels came into our harbour during the years 1861, 1862, 1863, being an average of 248 per annum.

During the year 1857 the number was 221, as stated in a communication of mine to Mr. Loos, on the 29th of November 1859.

I have, &c.
(signed) John Farrell, Secretary,
Waterford Harbour Commissioners.

Sir James Donabral,
Monkstown, Dublin.

Sir, Ballast Office, Waterford, 5 January 1864.

In reply to your letter of the 29th ultimo, I beg to say that generally speaking there are 7 buoys in this harbour, outside Passage, and 15 inside Passage; these latter within a very few miles of Waterford City.

At present there is a green wreck buoy at Broomhill, outside Passage; and on the other hand, the middle buoy of the bar is temporarily away. Thus seven is still the number, though positions are for the present somewhat changed.

The only beacon in the harbour is at Passage; a pole with a barrel on its summit marking the point of land known as the "Spit of Passage."

The 15 buoys inside Passage are above Check Point: viz., one at the Bingledees Rocks, one at Bolton's Rock, eight on the Ford, and five in the King's Channel.

Our black buoys are to be kept to starboard by vessels coming in, and the red buoys to the port side.

The only lights at the harbour are your own: viz., the Hook, the Dunmore, and the Duncannon lights.

Should you desire any further particulars, they shall be at once supplied.

I have, &c.
(signed) John Farrell, Secretary,
Waterford Harbour Commissioners.

The Secretary, Ballast Office,
Dublin.

NEW ROSS.

Harbour Commissioners Office, New Ross,
23 January 1864.

Sir,

I HAVE received yours of the 22d instant, requesting the New Ross Harbour Commissioners to give you a list of the light, buoys, and beacons.

The port of Ross only extends to Check Point; from the junction of the River Barrow with the River Suir and to this port is a river pilotage, and have no lights. The Waterford Harbour Commissioners will give you information relative to lights.

The following is a list of buoys on the River Barrow, from Check Point to New Ross: viz.,

- No. 1. Buoy at the Pink.
- No. 2. Buoy at Glammara.
- No. 3. Buoy at Rochestown Bank.
- No. 4. Buoy at Drundowny Point.

I am, &c.

(signed) *James Kearns,*

Secretary to Commissioners.

To the
Secretary of the Ballast Office, Dublin.

WEXFORD.

RETURN of the several Lights, Buoys, Beacons or Perches, within the Jurisdiction of the Harbour Commissioners of Wexford.

Name or Denomination of Lights, Buoys, Beacons, or Perches; their Distinctive Colours or Marks.

Within Harbour.

Name or Denomination.	Colour, Mark, or Shape.
Cull Channel Buoy - - - -	Red.
Ravin Point Buoy - - - -	Red.
Perch of Flats - - - -	Cage Head, Black.
Sailing Channel marked by:	
Five buoys on port hand - - -	Black.
Seven buoys on starboard - - -	Red.
Three buoys in fairway - - -	White.
Three buoys to main.	
New Sailing Channel at Gulben - - -	Red.
Rock Buoy - - - -	Black.
Gulben Perch - - - -	Black, Cross-head.
Rositor's Perch - - - -	Black, Cross-head.
North-side Perch - - - -	Black, Cross-head.

If lights, whether they be permanent or periodical; if the latter, how or on what occasions lighted?

Nil.

Object in placing such light or lights, buoys, beacons, and perches?

Outside harbour to mark the north bar and Hantoon entrances, and to show the position of the Dogger Shoals, &c.

Inside harbour to mark sailing channel.

Whether approached by light, compass, bearings, or marks?

By bearings and marks.

Distances between the several lights, buoys, beacons, or perches, from the entrance of Wexford Harbour to the Quays at Wexford?

A sailing channel of about four miles from the north-east bar to the quays, marked by buoys at irregular distances, say from three to five hundred yards.

If lights, buoys, beacons, or perches, how often inspected or examined, and by whom?

Buoys inside harbour, by harbour master. Buoys outside harbour, by pilot master.

If lighthouse, beacon, or perch, how often painted, and buoys how often shifted?

Buoys shifted and painted once in each year.

DROGHEDA.

RETURN of the several Lights, Buoys, Beacons, or Perches within the Jurisdiction of the Harbour Commissioners of Drogheda, from the Bar to the Quays at Drogheda.

Name or Denomination of Lights, Buoys, Beacons, or Perches, their distinctive Colours or Marks.

Name or Denomination.	Colour, Mark, or Shape.
Bar Perch.—South side of channel, having a cradle on top. There is at present an iron buoy placed about 60 yards on the east side of this perch, which will be removed at the approach of summer, due notice of which will be given to the several ports along the coast. There are several small stone land-marks along the river to indicate the course of the channel.	The first light next the mouth of the river, on the south side, is a green light. The five others are bright lights.

If lights, whether they be permanent or periodical; if the latter, how or on what occasions lighted?

Periodical, oil lamps hung to beacons and lighted on dark nights.

Object in placing such light or lights, buoys, beacons, or perches?

To assist steamers and sailing vessels navigating the river.

Whether approached by sight, compass bearing, or marks?

By sight by day, and by light by night.

Distance between the several Lights, Buoys, Beacons, or Perches from the Bar to the Quays of Drogheda.

South Side.

The distance between the bar perch and the next wooden perch, is 65 statute perches; between the second and third, 47 perches; between the third and fourth, 290 perches; between the fourth and fifth, 132 perches (the latter with the following are stone towers); between the sixth and seventh, 153 perches; between seventh and eighth, 560; and between the eighth and ninth, 167 perches.

North Side.

The outer perch is also a wooden perch. The distance between it and the second, which is a cut stone tower, with the others on this side, is 11 perches; between the second and third, 60 perches; between the third and fourth, 100 perches; between the fourth and fifth, 42 perches; between the fifth and sixth, 43 perches; between the sixth and seventh, 154 perches; between the seventh and eighth, 53 perches, and between the eighth and ninth, 420 perches. This latter one, which is near the line of low water, is of wood.

Lights.

There are two lighthouses on south side of the river, which are under the jurisdiction of the Ballast Board. The first light on the entrance of the river, under the control of Harbour Board, is a green light, and placed on the north side, the lamp of which is attached to the seventh perch. The second lamp is placed nearly opposite the former one, on the fifth perch, south side. The third lamp is placed on south side on the sixth stone perch or tower. The next lamp is placed on the last wooden perch, north side of the river, next the town. The next light is on the eighth stone tower on south side of river. The ninth light is on a small stone tower within half a mile of the harbour.

If lights, buoys, beacons, or perches, how often inspected or examined, and by whom?

By the Harbour Commissioners' engineer.

If lighthouse, beacon, or perch, how often painted, or buoy, how often shifted?

Perches coated annually with gas tar; no shifting of buoys or beacons.

DUNDALK.

RETURN of the several Lights, Buoys, Beacons, or Perches within the Jurisdiction of the Harbour Commissioners of Dundalk, from the Bar to the Quays at Dundalk.

Name or Denomination of Lights, Buoys, Beacons, or Perches, their distinctive Colours or Marks.

Name or Denomination.	Colour, Mark, or Shape.
Beacon, No. 1 - - - - -	Black (white light) hexagonal.
Ditto, No. 2 - - - - -	Ditto (green light) ditto.
Ditto, No. 3 - - - - -	Ditto (white light) ditto.
Ditto, No. 4 - - - - -	Red (red light) - ditto.
Ditto, No. 5 - - - - -	Ditto (white light) - ditto.
Ditto, No. 6 - - - - -	Ditto - ditto - ditto.
Ditto, No. 7 - - - - -	Ditto - ditto - pentagonal.
Ditto, No. 8 - - - - -	Not coloured, ditto - round.
Ditto, No. 9 - - - - -	Ditto - ditto - ditto.

There are three buoys under the jurisdiction of the Dundalk Harbour Commissioners, one sits on the shoals of the bar. The second in $3\frac{1}{2}$ fathoms at low water, and the third in 6 fathoms low-water.

From lighthouse to bar buoy - - - $\frac{1}{2}$ mile.

From thence to middle, ditto - - - 1 ditto.

From thence to outer, ditto - - - $1\frac{1}{2}$ ditto.

If light, whether they be permanent or periodical; if the latter, how or on what occasions lighted?

Lighted during tide time every night.

Object in placing such light or lights, buoys, beacons, or perches?

To enable vessels to reach the quays of Dundalk, and go to sea therefrom by night as well as by day.

Whether approached by sight, compass bearings, or marks?

By sight and compass bearings.

Distances between the several Lights, Buoys, Beacons, or Perches, from the Bar to the Quays of Dundalk.

From bar to lighthouse, 150 perches, and 170 perches from thence to No. 1 Beacon.	
From bar to No. 1 Beacon - - -	320 perches.
" No. 1 to No. 2 ditto - - -	240 "
" No. 2 to No. 3 ditto - - -	264 "
" No. 3 to No. 4 ditto - - -	110 "
" No. 4 to No. 5 ditto - - -	86 "
" No. 5 to No. 6 ditto - - -	148 "
" No. 6 to No. 7 ditto - - -	148 "
" No. 7 to No. 1 Perch - - -	126 "
" No. 1 Perch to No. 2 Perch - - -	87 "
" No. 2 Perch to quays - - -	160 "

If lights, beacons, perches, or buoys, how often inspected or examined, and by whom?

Examined about once a month, by the resident engineer to the Dundalk Harbour Commissioners.

If lighthouse, beacon, or perch, how often painted, or buoy, how often shifted?

Painted once a year, and shifted as occasion requires.

CARLINGFORD.

RETURN of the several Lights, Buoys, Beacons, or Perches within the Jurisdiction and under Control of Lord Clermont.

Name or Denomination of Lights, Buoys, Beacons, or Perches; their distinctive Colour or Marks.

Name or Denomination.	Colour, Mark, or Shape.
No. 1. Black Buoy off Haulbowline Light	Black; conical; Carlingford.
No. 2. Black Buoy off Carlingford - -	Black; conical; Carlingford.
No. 3. Red Buoy, tail of Scar off Soldiers' Point, Cranfield.	Red; conical; Carlingford.
No. 4. Red Buoy off Ballyedmond - -	Red; conical; Carlingford.
No. 5. Red Buoy, Earl's Rock, N.E. off Greenore Point.	Red; hoghead.

Iron perch on Sheep Rock.

Wooden perch on Black Rock, between Greenore and Carlingford.

Wooden perch on Black Rock, Omeath.

Wooden perch on Garnaway Rock, one mile from Warrenpoint.

Iron perch and frame on Halker Rock, between Greencastle and Ballyedmond.

If lights, whether they be permanent or periodical; if the latter, how or on what occasions lighted?

Ballast-office Lighthouses at Haulbowline, Carlingford Bar, entrance to Lough Slattery, and Greenore Point Lights; revolving light.

Object in placing such light or lights, buoys, beacons, or perches?

For the safe navigation of all vessels proceeding inwards from Carlingford Bar to the town of Newry, and vice versa.

Whether approached by lights, compass bearings, or marks?

By charts.

Distances between the several Lights, Buoys, Beacons or Perches, under Control of Lord Clermont.

From Haulbowline Light to Greenore Point Light, 2½ nautical miles distant.

From Black Buoy off lighthouse to Red Buoy off the Scar, Cranfield Bay, one-third of a mile; and from Greenore Point, 2½ miles.

From Black Buoy off Carlingford to Red Buoy off Ballyedmond Bank, five-eighths of a nautical mile.

Earl Rock Buoy (Red), distance from Greenore Point, half a mile E.N.E.

Sheep Rock, iron perch, west of Black House, a quarter of a mile.

Black Rock Perch to Greenore, three quarters of a mile.

Black Rock Perch (Omeath) to Garnaway Rock, five-eighths of a mile.

Garnaway to high-water mark, Warrenpoint, one mile.

Halker Rock, iron perch, frame and ball, distant from Black Rock three quarters of a mile; the former from Greenore Point, three quarters of a mile.

If lights, buoys, beacons, or perches, how often inspected or examined, and by whom?

Frequently inspected. Buoys off lighthouse, by William Sharkey; Greenore Buoys off Carlingford, by James Savage; Killowen Point, and frequently during the summer months, by Leonard Watson. All perfect, in good order to this date.

If lighthouse, beacon, or perch, how often painted, or buoy, how often shifted?

Buoys painted twice a year. Carlingford, on each iron buoy, 8-inch letters. The Earl Rock Buoy adrift for 10 days, during which time a temporary buoy was on, until the buoy was replaced in its former position, complete and painted.

Warrenpoint, 16 February 1864.

(signed) Leonard Watson.

STRANGFORD LOUGH.

NUMBER of Perches, Beacons, and Buoys maintained by Captain Nugent and Lord de Ros.

Captain Nugent's Perches and Beacons.

Names.	Remarks.
Pladdy Lug Perch - - - -	This is the most important danger point.
Gowland Rock Beacon - - - -	To be raised 10 feet this spring.
Lamp on Portaferry Quay.	
Walker Rock Perch - - - -	To be improved this spring.
Ballyhenry Point Beacon - - - -	To be built this spring.

Lord de Ros's Perches, Beacons, and Buoys.

Names.	Names.
Guns Isle Obelisk.	Crow Rock Buoy (The Hole.)
Garler Perch.	Barge Plaidy Buoy (The Hole.)
Clonybeg Beacon.	Hauling Buoy (The Hole.)
Two anchorage Beacons on Shore to mark the cross road-anchorage.	Swan Island Beacon.
Black Island Perch.	Church Point Perch.
Ferry Quarter Point Perch.	Tangist Rock Perch.
Strangford Town (the Hole) Perch.	North Slip Perch.
	Slitch Rock Perch and Cage.

BELFAST.

RETURN of the several Lights, Buoys, Beacons, or Perches, within the Jurisdiction of the Harbour Commissioners of Belfast Harbour.

Name or Denomination of Lights, Buoys, Beacons, or Perches; their Distinctive Colours or Marks.

Name or Denomination.	Colour, Mark or Shape.
Hollywood Bank Lighthouse - - -	Red light.
Channel Lights (three on south side) - -	Green.
Ditto - - (one on north side) - -	Red.
Carrickfergus Bank Buoy - - -	Red.
Sear Rock Buoy - - -	Red and White.
Oyster Bank Buoy - - -	Red.
Middle Bank Buoy - - -	Red and Black.
West Bank Buoy - - -	Black.
Victoria Channel Buoy - - -	Red.

Stone Beacon on west bank - - -



If lights, whether they be permanent or periodical. If the latter, how or on what occasions lighted?

Permanent.

Object in placing such light or lights, buoys, beacons and perches?

Placed for the safety and convenience of vessels frequenting the port of Belfast, principally to enable them to avoid sandbanks.

Whether approached by night, compass bearings, or marks?

By sight in clear weather during the day. By compass bearings at night, and during thick weather.

Distances between the several Lights, Buoys, Beacons, or Perches, from the entrance to Belfast Lough to the Quays of Belfast.

	Distance from Cape Light.	Distance from each other
	miles. cables.	miles. cables.
To Holywood Bank Lighthouse - - - - -	12 3	{ 1 1
" Green Light Head of Garmoy - - - - -	13 4	
" Red Light entrance to Victoria Channel - - - - -	14 0	0 6
" Green Light, South Twin Island (north-east end) - - - - -	14 3	0 3
" - Ditto - - ditto - - (south end) - - - - -	14 6½	0 3½
" Red Light centre of Queen's Bridge - - - - -	16 0	0 3½
" Scur Rock Buoy (south side) - - - - -	9 0½	
" Carrickfergus Bank Buoy (north side) - - - - -	10 0	
" Oyster Bank Buoy - - - - -	12 0	
" Middle Bank Buoy - - - - -	13 3	
" West Bank Buoy - - - - -	13 6	
" Stone Beacon - - - - -	13 9	
" Victoria Channel Buoy - - - - -	14 2½	

If lights, buoys, beacons, or perches, how often inspected or examined, and by whom?

Annually by the Commissioners and their officers.

If light-house, beacon, or perch, how often painted, or buoy, how often shifted?

When considered necessary.

LONDONDERRY.

RETURN of the several Lights, Buoys, Beacons, or Perches from the entrance of Lough Foyle to the Quays of Londonderry.

Name or Denomination of Lights, Buoys, Beacons, or Perches; their distinctive Colour or Marks.

Name or Denomination.	Colour, Mark or Shape.
<i>Lights:</i>	
2. Warren Point (temporary wooden structure.)	Black with light red light.
3. White Castle, wooden house on piles.	Red with bright light.
4. Ture - - - ditto - - -	Black - - - ditto.
5. Cunninghambury - ditto - - -	Red - - - ditto.
6. Coolkera, brick tower on shore - -	White - - - ditto.
7. Culmore, wooden box and pole - -	Red - - - ditto.
8. Borm Hall, stone foundations and wooden box.	Red - - - ditto.
9. Ross Bay, smack - - -	Black - - - ditto.
10. Rock, stone foundations and wooden box and pole.	Red - - - ditto.

Name or Denomination.	Colour, Mark, or Square.
<i>Buoys.</i>	
1. Tuns, N. E. of bank - - - -	Black.
2. Tuns, S. W. bank - - - -	Black.
3. M'Kenney's Bank, N. E. - - - -	Black.
4. M'Kenney's Bank, S. W. - - - -	Black.
5. Carnagaroe - - - -	Red.
6. Red Castle - - - -	Black.
7. Quigley's Point - - - -	Black.
8. Ture - - - -	Black.
9. Faughan - - - -	Black.
10. Crook, N. E. - - - -	Black.
11. Cloony Bank - - - -	Black.
12. Cloony Point - - - -	Black.
13. Pinnaburn - - - -	Red.
14. Rock Mill, south - - - -	Black.

Name or Denomination of Lights, Buoys, Beacons, or Perches, their Distinctive Colours or Marks.

Wooden Beacons.

Name or Denomination.	Colour, Mark, or Shape.
1. Doung, S. E. - - - -	Red.
2. Doung, S. W. - - - -	Black.
3. White Castle - - - -	Red.
4. Ture, south side of the bank - - - -	Black.
5. Ture, north side of the bank - - - -	Black.
6. Flats, No. 1, N. - - - -	Red.
7. Flats, No. 2, N. - - - -	Red.
8. Flats, No. 3, N. - - - -	Red.
9. Flats, No. 4, N. - - - -	Red.

Stone Beacons with Poles.

1. Thorn Hill, S. E. - - - -	Black.
2. Sir George Quay, N. - - - -	Black, with red ball.
3. Otter Bank, S. E. - - - -	Black.
4. Crook, No. 1, N. W. - - - -	Black, red ball.
5. Crook, No. 2, S. E. - - - -	Black.
6. Crook, No. 3, Warping Buoy - - - -	Red.

Note.—All the lighthouses, buoys, and beacons, on the north side of the channel, are red, and those on the south side are black; with the exception of the stone beacons on the north side of channel, are black with red ball.

If lights, whether they be permanent or periodical; if the latter, how or on what occasions lighted?

Lights are all permanent.

Object in placing such light or lights, buoys, beacons, or perches?

Warren Point Light is intended to lead a direct course to Moville Bay, from Enniskillen Lights, so as to avoid the Colloway Rocks and M'Kenney's Bank.

Red Castle Light is to mark Red Castle Spit.

White Castle Light, to lead into the narrow channel off Shandy Hall.

Ture Light, is to mark Ture Spit, or Bank.

Cunnysberry and Coolkera Lights are leading lights, and when brought into one, show the straight course over the Flats.

Culmore Point Light is to mark Culmore Point, and lead into Culmore Bay, when the Boomhall Lights come in view, and lead to the Ross Bay Ship Light; when abreast of it, the course is to run for the Rock Light; and the lights along the quays lead to any required berth.

The

The beacons, buoys, and perches are to mark the various banks off which they are placed and after which they are named.

Whether approached by sight, compass bearings, or marks?

Approached by sight, compass bearings, and marks.

Distances between the several Lights, Buoys, Beacons, or Perches, from the entrance of Lough Foyle to the Quays of Londonderry.

<i>Lights.</i>		<i>Statute Miles.</i>	<i>Faths.</i>
From the Innesheaven Lights to Warren Point Light, is -	-	1½	
Warren Point Light to Red Castle Light, is -	-	7	
Red Castle Light to White Castle Light, is -	-	1½	
White Castle Light to Ture Light, is -	-	2	
Ture Light to Cunnyserry Light, is -	-	2	1,600
Cunnyserry Light to Coolkera Light, is -	-	0½	"
Coolkera Light to Coolmore Light, is -	-	0½	"
Coolmore Light to Boomhall Light, is -	-	2	400
Boomhall Light to Ross Bay Light Ship, is -	-	0	1,350
Ross Bay Light Ship to Rock Light Ship, is -	-	1	"
<i>Buoys.</i>			
Tans Buoy, N.E. to Tans Buoy, S.W., is -	-	2½	
Tans Buoy, N.E. to McKenney's Bank Buoy, N.E., is -	-	3½	
McKenney's Bank Buoy, N.E. to McKenney's Bank Buoy, S.W., is -	-	"	1,200
McKenney's Bank Buoy, S.W. to Carnagarvi Buoy, is -	-	1½	
Carnagarvi Buoy to Red Castle Buoy, is -	-	3	1,200
Red Castle Buoy to Quigley's Point Buoy, is -	-	3	"
Quigley's Point Buoy to Ture Buoy, is -	-	1	"
Ture Buoy to Faughan Foot Buoy, is -	-	3	200
Faughan Foot Buoy to Crook, is -	-	2	100
Crook Buoy to Clooney Bank, is -	-	-	1,510
Clooney Bank Buoy, S.E. to Clooney Bank, S.W., is -	-	-	516
Clooney Bank Buoy, S.W. to Pinskyburn, across to N.W. side of Channel -	-	-	506
Pinskyburn Buoy to Rock, is -	-	-	600

If lights, buoys, beacons, or perches, how often inspected or examined, and by whom?

Inspected frequently by the resident engineer, and annually by the Harbour Commissioners and Harbour Master.

If light house, beacon, or perch, how often painted; or buoy, how often shifted?

Painted formerly, yearly; but not for the last two years. Buoys are sighted frequently, and shifted as required.

(signed) James McGhee,
Harbour Master.

SLIGO.

RETURN of the several Lights, Buoys, Beacons, or Perches within the jurisdiction of the Harbour Commissioners of Sligo up to the Quays at Sligo.

Name or Denomination of Lights, Buoys, Beacons, or Perches, their distinctive Colours or Marks.

Name or Denomination.	Colour, Mark, or Shape.
Three lights under the jurisdiction of the Ballast Board, within the Harbour of Sligo.	
One buoy on Wheaten Rock - - -	Black; oblong.
One buoy on Blind Rock, at Rosegally Pond.	Black.

Name or Denomination.	Colour, Mark, or Shape.
One buoy at bar, south side - - -	10 buoys; red.
One buoy at Corribby Bank, inside bar -	Black; upright.
One buoy off Deadman's Point, called Bonore Spit.	Black.
One buoy at Port Cummin, near Ballast Bank.	Black; upright.
One buoy at Herring Bick Point - -	Black; oblong.
One buoy at Lower Flat in river - -	Black; upright.
One buoy at Bungar - - - -	Red; oblong.
One buoy was in port replaced by a beacon	Black.
Two beacons, 50 feet high, lower Rosess Point, one white, one black.	
25 perches or beacons in river, showing channel, all black.	

If lights; whether they be permanent or periodical; if the latter, how or on what occasion lighted?

Permanent, from sunset to sunrise.

Object of placing such light or lights, buoys, beacons, or perches?

Wheaten Rock Buoy, to mark that rock.

Blind Rock Buoy - - same.

Bar Buoy, to mark Bungar Spit.

At Carrinbee, to mark that bank, and to change the course to enter the harbour.

At Deadman's Point, to mark Bonore Spit.

At Portcummin, to mark Portcummin Spit.

At Herring Bree Point, to mark a wrecked vessel.

At Lower Flats, to mark north side of channel.

At Bungar, to mark the extremity of Bungar Sands.

Beacon in Pool, to show the sand in Pool and Seal Bank.

Two beacons on Lower Rosess Point, to guide ships in and out over the bar.

25 beacons in river, to mark the channel.

Whether approached by sight, compass bearings, or marks?

Approached by sight.

Distances between the several lights, buoys, beacons, or perches from the jurisdiction of the Commissioners of Sligo to the Quays of Sligo?

Inner Lights, four miles from the quay.

Black Rock Lighthouse, six miles from the quays.

Wheaten Rock Buoy - - - - 8 miles from quays.

Blind Rock - - - - 7 - ditto.

Corrintee - - - - 6 - ditto.

Deadman's Point - - - - 4 - ditto.

Herring Bree Point - - - - 4 - ditto.

Lower Flats - - - - 2 - ditto.

Bungar - - - - 5 - ditto.

Beacon in Port - - - - 3 - ditto.

Two Beacons on Lower Rosess Point 6 - ditto.

25 Beacons in river, along line in channel; quays extending four miles.

If lights, buoys, beacons, or perches, how often inspected or examined, and by whom?

Buoys, beacons, and perches inspected each summer by the Harbour Master; the Master Pilot has orders to report any accident or change.

If lighthouse, beacon, or perch, how often painted; or buoy, how often shifted?

Painted once a year, if required; not shifted.

7 March 1864.

BALLINA.

RETURN of the several Lights, Buoys, Beacons, or Perches from the entrance of the River Moy to the Quays of Ballina.

Name or Denomination of Lights, Buoys, Beacons, or Perches, their distinctive Colours or Marks.

Name or Denomination.	Colour, Mark, or Shape.
No lights.	
25 buoys from bar mouth to the quay.	12 red buoys on west side.
Two beacons on the Island of Bartra, for leading marks over the Bar.	13 black buoys on east side, fan shape.

If lights, whether they be permanent or periodical; if the latter, how or on what occasion lighted?

No lights.

Whether approached by sight, compass, bearings, or marks?

Approached by sight, compass, bearings, and marks.

Distances between the several lights, buoys, beacons, or perches, from the entrance to the River Moy to the quays of Ballina?

Buoys and perches from 200 to 400 yards apart.

If lights, buoys, beacons, or perches, how often inspected or examined, and by whom?

Inspected by the harbourmaster, as occasion requires.

If lighthouse, beacon, or perch, how often painted; or buoy, how often shifted?

Buoys shifted as often as occasion requires.

Object of placing such light or lights, buoys, beacons, and perches?

For the navigation of the river.

LIMERICK.

RETURN of the several Lights, Buoys, Beacons, or Perches within the Jurisdiction of the Harbour Commissioners of Limerick.

Name or Denominations of Lights, Buoys, Beacons, or Perches; their distinctive Colours or Marks.

Name or Denomination.	Colour, Mark, or Shape.
Loop Head - - - - -	Bright fixed light.
Kilbdrum Point - - - - -	- - ditto.
Tarbert Point - - - - -	- - ditto.
Beaver Rocks - - - - -	- - ditto.
Bowlings Rock - - - - -	Perch of iron upright, basket head.
Foynes Harbour, east entrance - - -	Two black, one red, buoys.
Ditto - - west entrance - - -	One black, one red, buoy.

Under Ballast Board.

Not under their jurisdiction.

No other lights, beacons, buoys, or perches within the jurisdiction of the Harbour Commissioners.

Note.—The Harbour Commissioners, in order to render the Shannon navigable at night recommended the erection and placing of the following beacons, buoys, and perches:—

- | | |
|----------------------------------|------------------------------|
| 1. Horse Rock Beacon. | 10. Flagstaff Rock Beacon. |
| 2. Bridges Rock Buoy. | 11. Harvill's Rock Buoy. |
| * 3. Sod Island Beacon. | * 12. Ballast Rock Beacon. |
| * 4. Longbeac Rock Beacon. | 13. Muckinish Point Buoy. |
| * 5. Spilling Rock Beacon. | 14. Cock Rock Buoy. |
| 6. Deadland Buoy. | * 15. Cock Creek Perch. |
| 7. Scarlet's Northail Buoy. | 16. Coonagh Point Buoy. |
| * 8. Crawford's Rock Beacon. | 17. End of Embankment Perch. |
| 9. Eastern tail of Whelp's Buoy. | |

* Of these the Commissioners of Public Works have sanctioned the erection of the six beacons marked (*): those beacons have been contracted for, and are now being placed in position; provision has been made at top of each for lighting them, but no measures have been taken for supplying such lighting.

If lights, whether they be permanent or periodical; if the latter, how or on what occasions lighted?

Lights permanent, and lighted throughout the year, under the regulations of the Ballast Office of Dublin.

Object of placing such light or lights, buoys, beacons, and perches?

For the purpose of facilitating the safe navigation of the entrance to and channel up the Shannon in all circumstances and at all times.

Whether approached by lights, compass, bearings, or marks?

By each and all as occasions require.

Distance between the several lights, buoys, beacons, or perches, from the entrance of the Shannon to the Quays of Limerick?

Loop Head to Kilcadmone Light	-	-	-	9 miles.
Kilcadmone to Turbert Light	-	-	-	14½ "
Turbert to Beaves Rock Light	-	-	-	14½ "
Turbert to Bowlings Rock Perch	-	-	-	1½ "

Buoys at Foyuca, for local navigation only.

If lights, buoys, beacons, or perches, how often inspected, or examined, and by whom?

Lights and buoys inspected by the Ballast Office officials of Dublin periodically; particulars not known.

If lighthouse, beacon, or perch, how often painted; or buoy, how often shifted?

Reference to Ballast Office in Dublin for this information.

Limerick, 5 February 1864.

(signed) N. P. Kendall,
Harbour Master.

APPENDIX (B.)

LETTER from Lord Clement on the Marking of Carlingford Lough.

Sir,

Ravensdale Park, Newry, 14 March 1864.

I HAVE the honour to acknowledge the receipt of your letter of the 2d instant, enclosing a copy of an extract from the report of a deputation of the Ballast Office Board, relating to the several sea-marks from the entrance of Carlingford Lough to Warrenpoint, to which you call my attention. I beg leave to say, in reply to the above, that although I am the proprietor by purchase of small anchorage tolls leviable upon such vessels entering the lough as do not belong to the Port of Newry, there is no obligation or condition, in the patent which grants the tolls, binding the proprietor to the buoying of the lough.

I may add that the buoys which I caused to be laid down a few years since were merely voluntary contributions on my part, and were not placed in consequence of any obligation or demand as of right.

I have, &c.
(signed) Clement

W. Loes, Esq., Ballast Office, Dublin.

APPENDIX (C.)

LETTERS from Lord De Ros and Captain Nugent on the Marking of Strangford Lough.

My dear Sir,

Stephinstown, Dundalk, 2 March 1864.

Your note and the official letters have just followed me here. Nothing can be more correct, I think, and I need hardly add more satisfactory, than the official report. There is only one remark I would venture to offer. The report says, "There is not, properly speaking, any controlling power;" but does not Henry the Eighth's Grant, which has been acted upon by my ancestors and by myself for nearly 350 years, amount to a controlling power? Nugent's authority on the east shore derives from the same source; and though he considers himself acting under a grant of Charles the Second, yet there is no doubt but that his grant was a diversion of the authority of the Earls of Kildare to the advantage of the Savages (now Nugents), allowed to occur by neglect of their agents, and become permanent now by lapse of time. I much approve the representation of the lough not as a port of trade (though it has, in truth, five small ports within its waters) but as a valuable refuge for coasters in bad weather.

Believe me, &c.

(signed) De Ros.

Sir James Donbrain.

P.S.—I am afraid I cannot give you any information about the grant to Ardgliss; indeed, I did not know there had been any grant since the old one of 50 years ago.

Sir,

Woodon Barracks, 8 March 1864.

I am to acknowledge the receipt of your letter of 29th February, enclosing a copy of a report from the deputation of the Ballast Board who recently inspected the several marks in Strangford Lough, and am glad that they were satisfied with the way in which the perches and beacons on my shore are maintained by me.

I have, &c.

(signed) A. Nugent, Captain,
2d Dragoons.

W. Lees, Esq., Ballast Office, Dublin.

APPENDIX (D.)

REPORTS of Captain Roberts, R. N., on the Marking of the Shannon.

Sir,

Ballast Office, Dublin, 18 December 1861.

In compliance with the Board's directions, contained in your letter of the 28th of October last, namely, that I proceed to the Shannon, and examine into the state of the buoys and beacons there, reporting the result of such examination to the Board, I beg to state that I proceeded to Limerick on the 11th instant, and from there down the Shannon in one of the river steamers to Kilrush, returning in the same manner to Limerick.

I found that there are no buoys whatever marking the numerous dangers in that river, except those belonging to the Port of Dublin Corporation, and which are in Foynes Road. There is but one perch and one stone beacon, the former belonging to the Port of Dublin Corporation, the latter to the Limerick Harbour Commissioners.

It appears that formerly nearly all the dangers were marked by buoys; that in the year 1834 those buoys were placed in care of the Harbour Commissioners; since then they had been allowed to break adrift, and were never replaced. The property of the Harbour Commissioners has been mortgaged to the Board of Works, who have foreclosed; and, in consequence, the Harbour Commissioners have no power to expend any money in improving the navigation of the Shannon without the sanction of that Board.

I have also to report that some years since the Beal Bar, at the entrance to the Shannon, was buoyed by the Port of Dublin Corporation; but in consequence, I believe, of the fishermen having constantly sunk it (it being in the way of their nets), the Corporation would no longer buoy it. This is to be regretted, as a buoy on this bar would be found of great use, not alone to vessels trading to and from the Shannon, but to vessels seeking shelter in adverse gales.

I may add, in conclusion, that no buoys marking the dangers in the Shannon are shown in the Admiralty Charts, as the last Admiralty Survey has been made since the buoys have disappeared.

I have, &c.

(signed) R. F. Roberts,
Marine Inspector.

William Lees, Esq.

Sir,

Ballast Office, Dublin, 24 February 1862.

THE Board having directed me to state what would be the probable cost of marking the several dangers in the River Shannon, I beg to report that, in order to do this effectually, it is essential that the following dangers in that river should be marked, namely:—

- | | |
|--|--|
| 1. Beal Bar. | 10. Shoal off Bridge's Rock, South Shore. |
| 2. Reana Shoal. | 11. Bird Rock. |
| 3. Carrig Shoal. | 12. Lughoon Rock. |
| 4. Oyster Bank. | 13. Hoghead Rock. |
| 5. Long Rock. | 14. Slate Rock. |
| 6. Herring Rock. | 15. The Whelps, East, West, and North Edge; three marks. |
| 7. Spit, south of Horse Rock, entrance to Clare River. | 16. Hornet Rock. |
| 8. Waller Bank, North End. | 17. Muckinish Flat; three marks. |
| 9. Bridge's Rock, on Middle Ground, South End. | 18. Cork Rock. |
| | 19. Foul Ground, near Barrington Quay. |

I would suggest that the first four named dangers (*viz.*, Beal Bar, Reana Shoal, Carrig Shoal, and Oyster Bank) should be marked by egg-bottom conical buoys. The cost of these buoys with their moorings, together with the necessary duplicates, which are required for shifting and in case of accidents, would amount to the sum of about 368 l.

For marking the other dangers mentioned above, and where the nature of them will admit of so doing, I would propose to place rubble beacons, built of limestone (which is easily obtained in that locality); and where these cannot be erected for want of a proper foundation, I would propose to place pile beacons, formed of one balk of timber, iron-shod, and driven about nine feet into the mud; the piles to be cross-latticed for about two feet square. Nearly all of these dangers, except those which I have recommended to be marked by buoys, strip at low-water spring tides; none only cover at the top of the springs: therefore the necessary height for these beacons will altogether depend on the height the dangers they are intended to mark are covered at high-water; but I would suggest that 10 or 12 feet, at least, of them should be visible at all times of tide.

Beacons such as I have proposed would, at the first, cost considerably more than buoys; but the cost of maintaining them would be but trifling in comparison to the cost of maintenance of buoys, and which are so liable to be sunk or destroyed by vessels running into them.

In recommending beacons of stone or piles, I have done so on the presumption that the dangers they are proposed to mark are of that nature that they will admit of the erection of such marks respectively; but this can only be ascertained by a careful examination of them in each particular: to do so would entail an expense that I am not authorized to incur without special sanction, nor can I pretend to give a correct estimate of the probable expense of the whole, until this examination be made, and the necessary description of each beacon determined on.

I would, however, respectfully suggest that the Beal Bar and Reana Shoal be buoyed at the expense of the Mercantile Marine Fund, on the grounds that they are dangerous to vessels seeking refuge, in westerly gales, in either Scatterry or Tarbert Roads (the cost of which would be about 184 l.)

William Lees, Esq.

I have, &c.
(signed) E. F. Roberts,
Marine Inspector.

LETTER from the Secretary to the Board of Public Works, Dublin, to the Secretary, Ballast Office.

Sir,

Office of Public Works, Dublin, 11 February 1864.

I AM directed by the Board to inform you, in reply to your letter of the 8th instant, that six beacons are being erected in the Lower Shannon—*viz.*, on the Cock Rock, the Ballast Crawford's Rock, Skilling's Rock, Loughbea's Rock, and Sod Island; and that the erection of no other beacons is at present contemplated.

W. Lees, Esq., Secretary, Ballast Office.

I am, &c.
(signed) E. Hornsby,
Secretary.

APPENDIX (E.)

LETTER from Waterford Harbour Commissioners.

Sir,

Ballast Office, Waterford, 23 March 1864.

In reference to your letter of the 29th ultimo and its enclosure (extract from report by Sir James Donohue and Mr. Callwell), I beg to say that the subject in question was under care by the Waterford Harbour Commissioners before the receipt of the letter and enclosure; and the Commissioners are now able to report, for the information of the Port of Dublin Corporation, that the buoys of this harbour and river are now in proper position, and that their periodical cleaning and colouring is at this moment in progress.

The Commissioners wish to state that steps have been taken by them to ensure more frequent, regular, and systematic supervision of their buoys and other sea-marks.

The Resolution annexed, adopted by the Harbour Commissioners on the 21st instant, indicates that they are taking steps to enforce official responsibility for the future correctness and efficiency of the sea-marks.

The Commissioners wish to explain that the two buoys of Seedy's Bank were advisedly removed long since, many years ago. They conferred no advantage to counterbalance the degree of obstruction they caused to free navigation, lying as they did right in the track of many steamers, and other vessels not of heavy draught.

The Commissioners would therefore respectfully suggest that these two buoys be omitted from subsequent issues of the chart.

The Commissioners have had to regret that the inspection made by your Committee took place at the eve of the periodical overhaul of the buoys, and at the close of a season during many weeks of which tempestuous weather precluded boats from taking any steps for recovery of sunken buoys, replacing shifted buoys, or repair of damages.

The Waterford Harbour Commissioners are grateful for the favourable allusion again made to the expediency of erecting a small lighthouse at the spit of passage. In 1859, as in 1850, the Port of Dublin Corporation recognised and set forth the advantages that would result from such erection, and proclaimed that it would be of great utility to much more than the local trade of Waterford Harbour.

The Commissioners request and hope that the Port of Dublin Corporation will not cease to urge this view of the latter subject upon the Trinity House and the Board of Trade.

The Commissioners have also to express their thanks for the notice taken of their contemplated improvement of the ford near Waterford City.

I have, &c.
(signed) John Farrell, Secretary,
Waterford Harbour Commissioners.

William Loea, Esq.,
Secretary of Port of Dublin Corporation.

At Meeting of Waterford Harbour Commissioners, 21st March 1864,

It was Resolved,—

THAT we now request the pilot master to make frequent inspections of the various buoys, beacons, and sea-marks in this harbour and river, and report to this Board once a month with reference thereto, and that he shall perfectly understand that we hold him altogether responsible for the accuracy of their position and general efficiency.

APPENDIX (F).

LETTER from Sir James Drombrain to R. A. Plunket, Esq.

Sir,
Carlingford Lough, 18 February 1864.
REFERRING to the correspondence which has taken place upon the subject of the lights, buoys, and beacons within the jurisdiction of the Commissioners of Navigation for the Port of Newry, it appears to us, that as their powers do not extend beyond Warren Point, and that they disclaim all responsibility as to the exhibition of lights between that place and Newry, it does not come within the scope of our inquiry to require any further particulars from them.

At the same time we beg to thank the Navigation Commissioners for the ready and courteous manner in which they have met our inquiries.

R. A. Plunket, Esq.,
Navigation Office, Newry.

I am, &c.
(signed) Jas. Drombrain.

LIGHTHOUSES, &c. (IRELAND).

COPY of REPORT to the BOARD of TRADE by the
PORT of DUBLIN CORPORATION of the Results of
their Inspection of LOCAL LIGHTHOUSES, BUOYS,
and BEACONS in *Ireland*.

(Presented pursuant to Act 25 & 26 Vict. c. 63, s. 43.)

Ordered, by The House of Commons, to be Printed,
18 April 1864.
